IN THE SPECIFICATION:

In the Brief Description of the Drawings, please replace the paragraph on page 17, line 8, with the following amended paragraph:

"Figures ~~11-13 illustrate example measurement task configuration tool interface panels, according to one embodiment;~~ 11 illustrates an example configuration tool measurement setup interface, according to one embodiment;

Please add the following new paragraphs at page 17, line 10 (just after the above amended paragraph):

Figures 12A-12D illustrate tabbed controls for configuring various aspects of the measurement setup, according to one embodiment;

Figure 13 illustrates an advanced configuration panel, according to one embodiment;

Please replace the paragraph beginning on page 28, line 26, with the following amended paragraph:

As Figure 4 also illustrates, various of the measurement driver components may be operable to generate respective products which may be useable by other measurement driver components, by other software programs or systems, or by a user. More specifically, as shown in Figure 4, in one embodiment, the measurement task specifier 730 may be operable to generate a measurement task specification 740. In one embodiment, the measurement task specification 740 may comprise software objects or data structures, such as C++ objects, which may specify the measurement task. In one embodiment, the measurement task specifier 730 may be a measurement task wizard, i.e., a software program which leads the user through a measurement task specification process to create the measurement task specification 740. In another embodiment, the measurement task specifier 730 may take the form of a measurement task configuration tool, which is a software program invocable by the user under a development environment, such as the National Instruments LabVIEW™ environment or Measurement Studio™ programming development environment (the terms LabVIEW,

and Measurement Studio, used throughout this application, are trademarks of National Instruments Corporation). In yet another embodiment, the measurement task specifier 730 may simply be an API through which the user makes calls to generate the task specification. Thus, in various embodiments, the measurement task specifier 730 may generate the measurement task specification 740 in response to user input.

Please replace the paragraph beginning on page 29, line 21, with the following amended paragraph:

In one embodiment, the run-time specification 770 may similarly comprise software objects or data structures, such as C++ objects, which may specify the run-time parameters for software and/or hardware used to implement the specified measurement task. The run-time specification 770 may comprise parameter specifications for one or more measurement primitives 408 which correspond to rudimentary measurement tasks or operations. Said another way, the run-time specification 770 may comprise a collection of primitive settings, each of which may comprise a detailed and unambiguous "recipe" for a primitive. For example, primitive settings for a digitizer, such as a National Instruments E-Series™ digitizer, may include: Dither (Yes, No), Polarity (Bi-polar, Uni-polar), Gain, Mode (Calibration, Differential, Non-Referenced Single-Ended, Referenced Single-Ended, Auxillary, Ghost), Generate Trigger (Yes, No), and Last Channel (Yes, No). (The term E-Series, used throughout this application, is a trademark of National Instruments Corporation.)

Please replace the paragraph beginning on page 57, line 5, with the following amended paragraph:

In some ADEs, (e.g., LabVIEW™ and LabVIEW Express™), the configuration tool may be represented as a top-level, distinguishable icon in the Data Acquisition palette (The term LabVIEW Express, used throughout this application, is a trademark of National Instruments Corporation.). When dropped on the diagram, the configuration tool may immediately launch, according to one embodiment. Double-clicking the icon later may launch and restore the configuration tool to its last saved state. In other ADEs,

(e.g., Measurement Studio) the configuration tool may be launched from a menu item, or a function panel where the task is defined.

Please replace the paragraph beginning on page 105, line 1, with the following amended paragraph:

In some prior art measurement systems synchronization issues present difficulties which result in increased complexity of task implementations. For example, it may be difficult to synchronize sub-sections of a device, to synchronize homogeneous devices, or to synchronize between heterogeneous devices. Figures 40A-~~1~~43A present example VIs which illustrate improved synchronization capabilities of the present invention as compared to prior art systems.

Please replace the paragraph beginning on page 105, line 28, with the following amended paragraph:

Figure 41A illustrates a VI in which a scan clock is shared across two DAQ devices, e.g., two NI E-Series™ devices, according to the prior art. This VI is an example of synchronization between homogeneous devices. As Figure 41A shows, a master/slave synchronization model is used in which one device is the master and the other the slave. Much of the timing and triggering signals must be explicitly specified, which greatly increases the complexity of the VI.

Please replace the paragraph beginning on page 106, line 7, with the following amended paragraph:

Figure 41B illustrates a VI sharing a scan clock across two DAQ devices, e.g., two NI E-Series™ devices, according to one embodiment of the present invention. As Figure 41B shows, the complexity of the configured system is significantly less than the prior art system presented in Figure 41A above, as almost all of the communication and synchronization may be handled automatically. In other words, the software components may automatically route signals over RTSI and the PXI back plane, as needed.

Please replace the paragraph beginning on page 109, line 1, with the following amended paragraph:

Figure 44A illustrates a VI for triggered acquisition with a DAQ device, e.g., an E-Series™ DAQ device. As Figure 44A shows, the VI implements the task with minimal components, using a general API to minimize device dependencies in the implementation.